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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, BRIAN D

ART UNIT	PAPER NUMBER
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2661

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DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/606,052

Applicant(s)

MAUGER ET AL.

Examiner

Brian D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the application filed 6/26/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20 is/are allowed.
- 6) ☒ Claim(s) 4-9, 12, 13, 17 and 23-29 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The applicant is requested to fill in blank on page 2, line 27.

Claim Objections

2. Claims 7-9, 14-17, and 24-29 are objected to because of the following informalities:

Claims 7 and 27, line 1, it is suggested to change "on to" to ---onto---.

Claims 14 and 17, it is suggested to change "MPLS" to ---multi-protocol label switching (MPLS)---.

Claim 24, "quality of service capable tunnels" in line 2 seems to refer back to "quality of service capable tunnels" in line 2-3 of claim 21. If this is true, it is suggested to change "quality of service capable tunnels" to ---said quality of service capable tunnels---.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-13, 16-17, and 21-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, line 1, "each said virtual private network" is vague and indefinite because only one virtual private network mentioned in line 2 of claim 1.

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Claim 7 recites the limitation "the resource constraints" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the sequence of tunnels" in line 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the complete path" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the resource constraints" in line 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the network edge" in line 4 and "the destination edge" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "said sequence of labels" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "said label switched path sections" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "the resource constraint" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "the sequence of tunnels" in line 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 provides for the use of a serial of tunnels, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

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Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwata (6,026,077) or Huang et al (6,301,244).

Regarding claim 10, Iwata and Huang disclose a method for selecting a series of tunnels between a source edge and a destination edge to provide a path having a QoS guarantee, wherein

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the resource availability from the source edge to the destination edge is established and wherein, the selection is made by offering a number of candidate central stages to the destination edge and allowing the destination edge to select a complete path (see setting up and selecting main path and alternate path between source and destination of figure 1 and col. 2, lines 22-29 of Iwata and abstract and figure 1 of Huang).

Regarding claim 11, Iwata further discloses the network has a hierarchy of first, second, and third levels of routers (see figure 1 of Iwata).

7. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Casey et al (6,205,488).

Regarding claim 14, Casey discloses a communication network comprising a plurality of nodes interconnected via QoS tunnels and incorporating a frame mode MPLS architecture, wherein end-to-end QoS guarantee services are provided by defining a label stack which delivers packets through a concatenated sequence of tunnels defined by successive labels in the label stack (see abstract; col. 3, lines 13-22; col. 4, lines 47-50).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al (6,501,754) in view of Iwata (6,026,077).

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Regarding claims 1-2, Ohba discloses a method of routing an information packet over a label switched path between first and second end stations comprising attaching to the information packet at a network edge a sequence of labels indicative of a corresponding concatenated sequence of label switched path sections, each path section extending between a pair of routers (see abstract; figure 5). Ohba does not specifically disclose a virtual private network comprising a hierarchical of first, second and third levels of routers. However, arranging network routers into levels is well known in the art. Iwata discloses a routing method in which routers are arranged into three levels (see abstract; figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to arrange the routers into levels as taught by Iwata in the system of Ohba in order to effectively route information packets through a large network.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al (6,501,754) in view of Huang et al (6,301,244).

Regarding claim 21, Ohba discloses a method for determining a label switched path in a network comprising a plurality of nodes in which resources availability from one network edge to the other is established (see abstract; figure 5). Ohba does not specifically disclose provide QoS in the network. However, the use of QoS for routing information packet in a network is well known in the art. Huang discloses the use of QoS for routing (see abstract; figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use QoS for routing as taught by Huang in the system of Ohba in order to distinguish high priority information from low priority information.

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11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al (6,501,754) in view of Huang et al (6,301,244) as applied to claim 21 above, and further in view of Iwata (6,026,077).

Regarding claim 22, Ohba in view of Huang disclose all the claimed subject matter as described in previous paragraph except for three levels of routers. However, arranging a network into three levels of routers is well known in the art. Iwata discloses three levels of network routers (see figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to arrange the network onto three levels of routers as taught by Iwata in the system of Ohba in view of Huang in order to effectively route information packets through a large network.

12. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casey et al (6,205,488) in view of Brueckheimer et al (6,574,224) and Huang et al (6,301,244).

Regarding claims 15 and 16, Casey discloses all the claimed subject matter as described in previous paragraph except for multiplexed label switched paths and resource constraints. However, multiplexing a new session onto a label switched path if the resource constraints of the first-stage and second-stage Layer 1 constraint-based routed label switched paths are satisfied is well known in the art. Brueckheimer discloses multiplexing a new session onto a label switched path (see col. 4, lines 29-33) and Huang discloses the use of constraint-based routing and determining if the resource constraints are satisfied (see col. 1, lines 47-50 and col. 2, lines 1-6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the techniques as taught by Brueckheimer and Huang in the system of

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Casey so that a new session can be multiplexed onto the path without effecting the quality of the existing sessions.

Allowable Subject Matter

13. Claims 18-20 are allowed.
14. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
15. Claims 3-9, 12-13, 17, and 23-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph and/or objection, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Katsube et al (6,341,127) and Luciani et al (2003/0088699) are cited to show label switching techniques which are considered pertinent to the claimed invention.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (703) 305-5133. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Brian Nguyen
10/15/03